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P/026/61/009/001/002/005
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Drift of electrons in ...

in the z-direction:

$$\frac{f_z}{m} = \frac{dv_z}{dt} = \frac{He}{m} v_x, \quad (2)$$

where v_x and v_z are the components of velocity along these axes.

Integrating equations (1) and (2), using the relation $E_0 = H_0 c$,

and putting $\Gamma = \frac{H_0 e}{m}$, and

$$v_x = - \frac{\Gamma_0 c}{\omega} \sin[\omega(\frac{z}{c} - t)]$$

and

$$(\frac{v_z}{c})^2 - 2 \cdot \frac{v_z}{c} + q = 0$$

where

$$q = \frac{\Gamma^2}{2\omega^2} \{1 - \cos[2\omega(\frac{z}{c} - t)]\}.$$

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For $q \ll 1$, and $v_z < c$, $\frac{v_z}{c} \simeq \frac{q}{2}$, and thus the amplitude of electron velocity along the direction of wave motion varies from 0 to

$c \frac{\Gamma^2}{2\omega^2}$. The mean value of the velocity in this direction is therefore $c \frac{\Gamma^2}{4\omega^2}$ and, substituting numerical values, the results shown

in the Table are obtained. The author concludes that: 1) Electric discharges occurring at different altitudes may produce considerable horizontal electron drift velocities; 2) The electron drifts may be unrelated to gas motion - a feature bearing on the theory of the creation of rippled layers in the ionosphere; 3) The horizontal velocities may be the source of quasi-klystron amplification of radio waves emitted upwards. There are 4 figures, 1 table and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English-language publication reads as follows: Lee R. Tepley, A Comparison of Spherics as Observed in the Very Low Fre-

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Drift of electrons in ...

quency and Extremely Low Frequency Bands, J.G.R., V 64, N. 12,
1959, p. 2315 - 2329.

ASSOCIATION: Institute of Basic Technical Problems, Committee for
International Geophysical Cooperation, Warsaw

SUBMITTED: December, 1960

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9,9100

AUTHOR: Manczarski, Stefan

TITLE: Wavelike structure of the ionosphere

PERIODICAL: Acta geophysica Polonica, v. 9, no. 1-2, 1961, 82-89

TEXT: This paper presents an analysis of wavelike ionospheric disturbances on the basis of ionograms in the shape of double lines, a feature which is being studied at the Ionosphere Station of the Institute of Telecommunication at Warszawa-Miedzeszyn (S. Jasiński) [Abstractor's note: No further reference]. This wavelike structure is of great importance for the range of low-powered radio stations, e.g. transmitters in artificial satellites, and is under investigation practically and theoretically at the Institute of Basic Technical Problems, Institute of Telecommunications, Committee for International Geophysical Cooperation, and the Research Laboratory at Zegrze. The author states that the important consequences of the wavelike structure were first indicated in 1954 by Polish

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Wavelike structure of the ...

Scientists (S. Manczarski, S. Jasiński) [Abstractor's note: No further reference in text] and confirmed by Americans in 1957 [Abstractor's note: No reference given]. He summarizes these: 1) The production of a new ionospheric wave propagation mode in the form of a "whispering gallery" with very small attenuation and almost double the maximum usable frequency obtained in the smooth ionosphere; 2) Considerable deviation over mountains from the direction of propagation. For simplification, the disturbances are assumed to be sinusoidal, and the effect of the earth's magnetic field is neglected. Fig. 2 shows a typical double line ionogram, and the corresponding wave reflections giving boundary conditions for the occurrence of such an ionogram. The dimensions shown in this latter part are derived from simple trigonometrical relationships for the tangent passing through the point of inflection of a sinusoid, shown in greater detail in Fig. 3. From Fig. 2,

$$\cos \gamma_1 = \frac{h_1}{h_2},$$

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$$\text{and } \lambda \approx 1.1d = 1.1h_2 \sin \gamma_1 = 1.1 \sqrt{h_2^2 - h_1^2}; \quad \gamma = \sin^{-1} \frac{0.75\lambda}{h_2};$$

$$a = \frac{\lambda}{2\pi} \tan \gamma.$$

Calculations show that the double lines should appear at $\lambda \sim 100$ - 300 km, $a \sim 3$ - 30 km, and $\gamma \sim 10^\circ$ - 33° . Fig. 4 indicates the "whispering gallery" effect, whence

$$\frac{f_1}{f} = \sqrt{\frac{0.5R \sin^2 \Delta + H}{H - H_1}}$$

from the relationship $f_1/f = \cos \delta / \cos \delta_1$, where f and f_1 are the maximum usable frequencies for the smooth and tilted ionospheres respectively. Thus, for $\Delta = 10^\circ - 15^\circ$, $H = 300$ km, $H_1 = 200$ km, $f_1/f = 1.98 \div 2.26$. A further simple trigonometrical calculation
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illustrates the deviation of wave propagation due to the joint action of ionospheric tilt and tilt of mountain slopes. The ionospheric tilt, ψ , is given in terms of the wave deviation, ϕ , the angle of incidence of the wave on the mountain, Δ , and the tilt of the mountain, Δ_0 , by

$$\tan \psi = \cot(\Delta + 2\Delta_0) \cos \frac{\phi}{2}.$$

The author points out that, due to the simplicity of the assumptions, considerable deviations from these results may be expected in practice. There are 7 figures, 2 tables and 21 references: 15 Soviet-bloc and 6 non-Soviet-bloc. The references to the English-language publication read as follows: H.F. Griffith, Focusing of waves in radio reception. Nature (London), V. 175, no. 4465, 1955; O.G. Villard, Jr., Sidney Stein, and K.C. Yeh, Studies of trans-equatorial ionospheric propagation by the scatter-sounding method. J. of Geophys. Research, V. 62, no. 3, September 1957; Sidney Stein, The role of ionospheric layer tilts in long range high-frequency radio-propagation. J. of Geophys. Research, V. 63, No. 1,

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Wavelike structure of the ...

March 1958; G.A. Ised, 'Round-the-world echoes. Marconi Review V,
XXI, No. 131, 1958.

ASSOCIATION: Institute of Basic Technical Problems, Committee for
International Geophysical Cooperation, Warsaw

SUBMITTED: December, 1960

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24128

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9.9100

AUTHOR: Manczarski, Stefan

TITLE: Problem of the field strength amplification of radio waves in the ionosphere

PERIODICAL: Acta geophysica Polonica, v. 9, no. 1-2, 1961, 91-102

TEXT: This paper presents a theoretical investigation of the problem stated in the title from the viewpoint of possible quasi-klystron amplification. The klystron effect is assumed to be created by variable inhomogeneities of the plasma which pass through the resonance, determined by the local electron density, corresponding to the frequency of the particular radio wave. The theoretical work has been supported by analysis performed by S. Jasiński at the Institute of Telecommunications [Abstractor's note: No reference quoted] on ionograms with brush-like lines [Fig. 2). These indicate violent formation of regions of increased ionization in the ionosphere, ascribed to the downflow of ionizing particle

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Problem of the field ...

streams of presumably solar origin. Each region covers a volume of the order of tens of cubic kilometers. Assuming modulation of the electron velocities under the influence of an electromagnetic wave, then outward radiation of high frequency energy occurs close to, and always below these regions. For electron energies in the region considered ($\sim 10^2$ eV), relativistic effects are becoming significant and

$$\frac{v_1}{v_2} \approx \sqrt{\frac{L_1}{L_2}}$$

where v and L are the velocity and energy of the electron respectively. Consider electrons passing through an ionospheric inhomogeneity on which a high frequency voltage

$$U_t = U_0 + U_a \sin \omega t$$

acts. U_0 is the potential difference corresponding to electron velocity v_0 , and U_a is the amplitude of the variable potential dif-

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ference, t is the time, and $\omega = 2\pi \times$ frequency. The modulation factor $k = U_a/U_0$, and hence

$$\frac{v_t}{v_0} \approx \sqrt{\frac{L_t}{L_0}} = \sqrt{\frac{eU_t}{eU_0}} \approx 1 + \frac{k}{2} \sin \omega t$$

so that velocity modulation of the electrons occurs. This results in the bunching of the electrons leaving the inhomogeneity, and, by a simple Fourier transform procedure, the intensity of electrons after passing through the klystron region is

$$i_a = 2I_0 J_1(\alpha) \sin(\omega t - \alpha) \quad (1)$$

J_1 is the first-order Bessel function, I_0 the incident electron intensity, and $\alpha = \omega \tau$, where τ is the mean transit time of electrons through the drift zone of the klystron region. Thus, an approximate picture is given of the space-time distribution of electron current causing high-frequency radiation in the region under con-

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spheric inhomogeneities. There are 7 figures, 1 table and 16 references: 2 Soviet-bloc. and 14 non-Soviet-bloc. The references to the 4 most recent English-language publications read as follows: Chang K., S. Bloom, July 1958, Proc. IRE, 46, No. 7, 1383-1386; R. Adler, G. Hrbek, G. Wade, October 1958, Proc. IRE, 46, No. 10, 1756-1757; A. Ashkin, December 1958, J. Appl. Phys. 29, No. 12, 1646-1651; S.C. Brown, Basic data of plasma physics, 1959.

ASSOCIATION: Institute of Basic Technical Problems, Committee for International Geophysical Cooperation, Warsaw

SUBMITTED: December, 1960

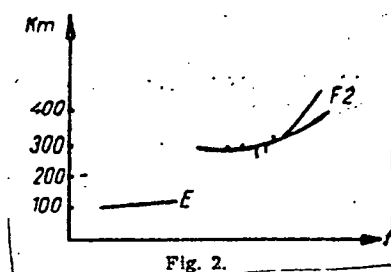
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Fig. 2.

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9.9100

AUTHOR: Manczarski, Stefan

TITLE: Investigations of radio echoes in the ionosphere
and exosphere

PERIODICAL: Acta geophysica Polonica, v. 9, no. 1-2, 1961, 103-111

TEXT: In this paper, the author examines the possible nature of radio echoes observed in addition to typical round-the-world echoes in recording radio time signals during the first Polish Antarctica Expedition (1958-9) and verified in Poland at the Research Center for Telecommunication Equipment, Zegrze (Master of Engineering J. Moliski) [Abstracts later: No reference given]. The echoes, with return times of 0.1 and 0.2 seconds, were observed in both long and short waves. The author concludes that the attenuation is least when the waves move along magnetic lines rather than perpendicular to them. He also explains why radio echoes occur most frequently on days of high solar

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the great circles passing through the geomagnetic poles. Even on these paths, the existence of some natural amplification in the ionosphere appears necessary to account for the echoes. This is considered in a separate paper by the author - Problemat wzmocnienia natężenia pola fal radiowych w jonosferze (Problem of the field strength amplification of radiowaves in the ionosphere [Abstractor's note: No other information given]). If the echoes, with a velocity close to that of light, are canalized in the exosphere by the trapping of charged particles in the geomagnetic field, the contours of these wave guides may be approximately determined from the radio echoes. Thus, ground-based study of the magnetic plasma traps is possible. Considering the occurrence of echoes for both long- and short-wave signals, the author connects the long-wave echoes with the phenomenon of atmospheric whistlers. The usual interpretation of whistler echoes is based on the oblique longitudinal mode of propagation, i.e. propagation along the geomagnetic lines, at much less than the velocity of light. This explanation is contradicted by: 1) Transmission coefficient too low for the ioni-

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zation densities observed in the exosphere; 2) Attenuation coefficient of the oblique longitudinal extraordinary mode is too high; 3) Length of return time of echo. The author explains these discrepancies by introducing a possible different mechanism for long-wave echoes, assuming that harmonics of the deformed primary impulse are propagated, and that interference of two consecutive harmonics restores, after de-modulation due to non-linear properties of the ionosphere, the original frequency. This also refers, in part at least, to atmospheric whistlers. The existence in the ionosphere of signal propagation velocities approaching that of light demands, for the ordinary ray

$$f > f_0 \quad \text{and} \quad f > f_H,$$

where f is the signal frequency, f_0 the natural plasma oscillation frequency, and f_H the gyro-frequency. There are 7 figures, 2 tables and 15 references: 7 Soviet-bloc and 12 non-Soviet-bloc. The references to the four most recent English-language publications

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Investigations of radio ...

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read as follows: C.P. Mook. A preliminary Meteorological Study of the Origin of Whistlers. J. of Geoph. Research, V. 64, No. 7, 1959, p. 745 - 748; A. Rosen. C.P. Sonnet. P.J. Coleman. C.E. McIlvain, Ionizing Radiation at Altitudes of 3500 to 36 000 km Pioneer I. J. Geophys. Research, V. 64, No. 7, 1959, p. 709 - 712; A.J. Dessler, Effect of Magnetic Anomaly on Particle Radiation Trapped in Geomagnetic Field. J. of Geoph. Research, V. 64, No. 7, 1959, p. 713 - 715; G.H. Millman. The Geometry of the Earth's Magnetic Field at Ionospheric Heights. J. of Geoph. Research, V. 64, No. 7, 1959, p. 716 - 720.

ASSOCIATION. Institute of Basic Technical Problems. Committee for International Geophysical Cooperation. Warsaw

SUBMITTED: December, 1960

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3,2310 (1049,1502)
9,9845

P/022/61/000/012/001/004
D218/D301

AUTHOR: Manczarski, Stefan, Professor

TITLE: Drift of electrons in plasma in the direction of propagation of an electromagnetic wave

PERIODICAL: Przegląd telekomunikacyjny, no. 12, 1961, 357-359

TEXT: Observations of radio signals transmitted by artificial earth satellites have shown that in many cases these signals are stronger than they would be in free space. This gives rise to radio echoes which travel round the earth two or three times or more and (less frequently) penetrate into the exosphere to a height of a few earth radii. This type of propagation of radio waves with an apparent negative attenuation is explained by the author in terms of "natural ionospheric amplification". Since this involves the appearance of horizontal drift of electrons, the author has undertaken a theoretical study of the physical conditions under which this type of motion may take place. These calculations show that the corresponding drift velocity is proportional to the square of the electric field-

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strength and to the square of the wavelength. Electron drift velocities which are necessary for the amplification mechanism to operate, can only be produced in electromagnetic fields with wavelengths between a few tens and a few hundred kilometers, and field-strengths of the order of a few volts per meter. Such electromagnetic waves are known to be associated with spherics. A simple plane-wave calculation is used to show that the drift velocity in the direction of propagation of a plane electromagnetic wave is given by

$$\left(\frac{v_z}{c}\right)^2 - 2 \frac{v_z}{z} + \frac{\Gamma^2}{2} \left\{ 1 - \cos \left[2\omega \left(\frac{z}{c} - t \right) \right] \right\} = 0$$

where v_z is the drift velocity $\Gamma = H_0 e/m$ and ω is the pulsatance of the wave. Numerical estimates show that very considerable drift velocities may be produced in this way. The electrons may be accelerated even to relativistic velocities. The electron drift may

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not be associated with gas motion (wind) in the atmosphere. It is suggested that this type of horizontal motion may be responsible for a semi-klystron amplification of radio waves emitted in the upward direction. There are 4 figures, 1 table and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English-language publication reads as follows: Lee R. Tepley - A Comparison of Sferics as observed in the very low frequency and extremely low frequency bands, J.G.R., v. 64, no. 12, 1959.

ASSOCIATION: IPPT PAN (IPPT PAS); Komitet międzynarodowej współpracy geofizycznej przy PAN (Committee for International Geophysical Cooperation of the PAS)

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AUTHOR: Manczarski, Stefan, Professor

TITLE: The wave-like structure of the ionosphere

PERIODICAL: Przegląd telekomunikacyjny, no. 12, 1961, 359-362

TEXT: The wave-like structure of the ionosphere and its origin are being studied at the Instytut podstawowych problemów techniki (Institute of Fundamental Problems in Technology). Experimental work is being carried out at the Instytut Łączności, Komitet międzynarodowej współpracy geofizycznej, Ośrodek badawczy sprzętu łączności w Zegrzu (Institute of Telecommunications, Committee for International Geophysical Cooperation, Testing Center for Telecommunications Equipment at Zegrze). In a previous paper the author showed that drift density enhancement may not be associated with gas motion and that spherics play an important part in this phenomenon. Well defined wave-like structure of the ionosphere may manifest itself in the doubling of ionograms. This is being systematically investigated by Docent S. Jasiński at the Instytut Łącz-

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The wave-like structure ...

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nosci, Stacja jonosferyczna Warszawa-Miedzeszyn (Institute of Telecommunications, Ionospheric Station Warsaw-Miedzeszyn). Simple geometrical considerations show that the double lines observed on the ionograms may be produced by spatial periodicities in the structure of the ionosphere with "wavelengths" of 100 - 300 km and amplitudes of 3-30 km, the maximum tilt of the ionosphere being between 10° and 33°. The tilt of the ionosphere may give rise to a new type of propagation of ionospheric waves which is described as the "whispering gallery effect". This type of propagation is characterized by very low attenuation and the appearance of a maximum usable frequency which is larger by a factor of two than the conventional MUF for a smooth ionosphere. In mountainous regions the direction of propagation of the ionospheric waves may be deviated from the orthodrome. The paper is concluded with simple examples of analyses of the wave-like structure of the ionosphere, based on recorded ionograms. There are 8 figures, 1 table and 21 references: 15 Soviet-bloc and 6 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: A. F. Wilkins, C.M. Minnis - Comparison of ionospheric radio transmission forecasts

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The wave-like structure ...

with practical results. Proceedings of I.E.E. v. 98, Part III, no. 53, May 1951; H. V. Griffith - Focusing of waves in radio reception. Nature (London), v. 175, no. 4465, (1955); O. G. Villard, Jr., Sydney Stein and K. C. Yeh. Studies of transequatorial ionospheric propagation by the scattersounding method. J. of Geophys. Research, v. 62, no. 3, September 1957; Sydney Stein - The role of ionospheric layer tilts in longrange high-frequency radio-propagation. J. of Geophys. Research, v. 63, no.1, March 1958.

ASSOCIATION: IPPT PAN (IPPT PAS); Komitet międzynarodowej współpracy geofizycznej przy PAN (Committee for International Geophysical Cooperation of the PAS)

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9,9100

AUTHOR: Manczarski, Stefan, Professor

TITLE: Amplification of radio-wave intensity in the ionosphere

PERIODICAL: Przegląd telekomunikacyjny, no. 12, 1961, 363-367

TEXT: This is a continuation of the work reported in the preceding two papers (this issue). The author carried out a theoretical study of the semi-klystron amplification in the ionosphere. This work was done at the Instytut podstawowych problemów techniki, Zakład teorii Łączności (Institute of Fundamental Problems in Technology, Department of Telecommunications Theory). This theory is based on the assumption that an electromagnetic wave can give rise to modulation of electron currents in the ionosphere. The variable ionospheric plasma irregularities play the role of klystron cavity resonators. As these irregularities diffuse, they pass through the plasma resonance corresponding to the frequency of the given radio wave. The electron currents which appear in the ionosphere

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Amplification of radio-wave ...

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sphere have larger drift velocities than in the case of klystrons. For example, recent rocket and satellite data indicate that at altitudes of the order of a few hundred kilometers, the most frequent electron energy is 10^5 eV. Ionograms obtained in vertical sounding of the ionosphere indicate the presence of enhanced ionization, existing for short periods of time in regions with linear dimensions of the order of 10 km^3 . If one assumes the semi-klystron velocity modulation of electron streams, then it follows that an electromagnetic wave will cause the electrons to emit high-frequency radiation in a narrow angular range. This may be responsible for the amplification of waves by a factor of 2-3 in field-strength, or 4-9 in intensity. In view of nonlinear ionospheric effects, parametric amplification may also be possible. The author derives a number of formulas showing the approximate space-time distribution of electron currents which are responsible for the emission of high-frequency radiation in the region below ionospheric irregularities. There are 7 figures and 20 references:

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Amplification of radio-wave ...

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6 Soviet-bloc and 14 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: D. J. Rose, S. C. Brown - Phys. Rev. 98, 310 (1955); C. C. Lin - The theory of Hydrodynamic Stability, 1955; W. Louisell, C. Quate - April 1958, Proc. IRE, 46, no. 4, 707-716; S. C. Browa - Basic data of plazma physics, 1959.

ASSOCIATION: IPPT PAN (IPPT PAS); Komitet międzynarodowej współpracy geofizycznej przy PAN (Committee for International Geophysical Cooperation of the PAS)

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AUTHOR: Manczyrski, Stefan, Professor

TITLE: Studies of radio echoes in the ionosphere and the exosphere

PERIODICAL: Przegląd telekomunikacyjny, no. 12, 1961, 367-371

TEXT: It is stated that rocket and satellite studies of the exosphere are, financially, beyond the scope of Polish researchers. However, significant information was obtained during the first Polish expedition to the Antarctic in 1958-1959. This expedition recorded the presence of various types of echoes in radio time-signals used in gravimetric measurements. The form of some of these echoes suggested the presence of amplifying mechanisms in the ionosphere. Atypical echoes of 0.1, 0.2, 0.4 sec and so on, were recorded. Since the observations in the Antarctic were limited to nine days only, the various effects were later verified at the Ośrodek badawczy sprzętu Łączności (Testing Center for Telecommunications Equipment). This work was carried out by J. Molski. The

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Studies of radio echoes ...

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observations were mainly concerned with the German station Nauen (4525 kc/sec). The signals were recorded with the aid of a high-speed recorder and a special amplifier with electro-mechanical negative feedback. Analysis of the experimental material indicated the presence of natural amplification mechanisms in the ionosphere. If it is assumed that the radio signals are propagated with a velocity which is very nearly equal to the velocity of light, and that they are guided in the exosphere by plasma irregularities, then the above observations of radio echoes can be used to obtain approximate profiles of these irregularities. The plasma condensations can be interpreted in terms of the Van Allen magnetic traps. It is stated that the Polish method of recording radio echoes is an inexpensive way of studying the configuration of the above condensations from the earth's surface. On long waves, the echoes are undoubtedly associated with the so-called atmospheric whistlers. The present author puts forward the following mechanisms in order to explain the propagation of radio echoes: It is suggested that one deals here with the propagation of a strongly distorted (harmonically) original impulse of relatively low frequency. Interference between

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successive harmonics reproduces, after demodulation in the ionosphere, the original fundamental frequency of the signal. This is explained by the following formula: $(n+1)f_1 - nf_1 = f_1$, where n is the number of the harmonic and f_1 is the fundamental frequency.

The demodulation is produced by the nonlinear properties of the ionosphere. This formula should apply not only to whistlers but also to long wavelength radio signals. The author is of the opinion that at least some whistlers give rise to propagation effects which can be described by the above mechanism. There are 5 figures, 2 tables and 15 references: 3 Soviet-bloc and 12 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: A. J. Dressler - Effect of Magnetic anomaly on particle radiation trapped in geomagnetic field. J. of Geoph. Research, v. 64, no. 7, 1959, p. 713-715; G. H. Millman - The geometry of the earth's magnetic field at ionospheric heights. J. of Geoph. Research, v. 64, no. 7, 1959, p. 717-726; N. C. Christofilos - The Argus experiment. J. of Geoph. Research, vo. 64, no. 8, 1959, p. 869-875; J. A. Van Allen, C. E. McIlwain, G. H. Ludwig -

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Studies of radio echoes ...

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Satellite observations of electrons artificially injected into the geomagnetic field. J. of Geoph. Research, v. 64, no. 8, 1959, p. 877-891.

ASSOCIATION: IPPT PAN (IPPT PAS); Komitet międzynarodowej współpracy geofizycznej przy PAN (Committee for International Geophysical Cooperation of the PAS) X

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BOCHENEK, Krystyn, doc.; MARCZARSKI, Stefan, prof.; RAJSKI, Czesław, prof.;
RYZKO, Stanisław, prof.

International Scientific Radio Union. Przegl telekom 34 no.9:278-279
S '61.

MANCZARSKI, Stefan, prof.

Application of cybernetics and radiophysics to parapsychology.
Przegl telekom 34 no.11:325-339 N '61.

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A059/A101

AUTHOR: Manczarski, S.

TITLE: Problem of the amplification of the radio-wave field intensity in the ionosphere

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 34, abstract 3Zh203 ("Abhandl. Geomagnet. Inst. Potsdam", 1962, no. 29, 260 - 273, German)

TEXT: In connection with recorded cases in which short waves propagate to very great distances, the hypothesis of the amplification of these waves in a ionospheric F stratum is advanced. For the substantiation of the hypothesis, it is necessary to assume the presence of electron fluxes with an electron energy of the order of 10^5 ev in the ionosphere. Regarding the nature of the amplifying mechanism, it can be close to that taking place in klystrons. In favor of the existence of fluxes speak, in the view of the author, the ionograms obtained at the Nauchno-Issledovatel'skiy institut svyazi (Scientific Research Institute of Communication) in the Polish People's Republic. On these ionograms, branches

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are observed which are ascribed to the appearance of additional ionization due to fast-particle fluxes.

B. Gershman

[Abstracter's note: Complete translation]

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MANCZARSKI, Stefan; MIKKE, Danuta

Studies on high-frequency field effects harmful to the human body.
Inst łączn prace 10 no.1:55-92 '63.

MANCZARSKI, Stefan, prof.

Recent tasks of radio-space communication. Przegl telekom
35 [i.e. 36] no.3:73-80 Mr '63.

MANCZINGER, Jozsef; NAGY, Sandor

Devices of diffusion processes. *Magy kem lap* 19 no.12:631-637 2 '64.

1.Chair of Chemical Industrial Processes of the Budapest Technical University (for Manczinger). 2. Research Institute of Organic Chemical Industry, Budapest (for Nagy).

TERPILOWSKI, J.; MANCZYK, R.

Complexonometric determination of zinc in some prescription
mixtures. Apt. delo 10 no. 2:85 Mr-Ap '61. (MIRA 14:4)
(ZINC--ANALYSIS)

VESKI, Arvo; LAURINGSON, A., retsenzent; MÄND, H., retsenzent;
PASSO, T., red.

[Erection of structures] Ehitus-konstruktsioonide
montaaž. Tallinn, Kirjastus "Eesti Raamat," 1964. 141 p.
[In Estonian] (MIRA 18:1)

MANDA, B.

It is necessary to react sensibly to the results of reaseach, p. 3. (Technicke Noviny.
Praha, Vol 2, No. 20, Oct 1954)

SO: Monthly list of East European Accessions (EEAL), LC Vol 4, No. 6, June 1955, Uncl

COUNTRY : Poland

H-35

CATEGORY :

ABS. JOUR. : AZKhim., No. 1959, No. 88865

AUTHOR : Manda, K.

INST. :

TITLE : New Kinds of Leather and Footwear Finishing

ORIG. PUB. : Przegl. skorzany, 1958, 13, No 2, 41-43

ABSTRACT : It is reported that the range of leather varieties, polyvinyl chloride materials and fabrics is not adequate to meet requirements of footwear manufacture. While a large proportion of the leather is derived from pigskins the range of leather varieties as concerns their finishing, colors and diversity of pattern is limited. Large size leathers are produced with coarse-grain surface of low luster and with breaks. The problem of producing wrinkle-finish leather and nap-finish leather has not been solved. No finished lining leather is being produced from split cattle hide and pigskin. No dense, elastic and strong soling material is being manufactured. Leather with a new

CARD: 1/2

COUNTRY : Poland
CATEGORY :

H-35

ABR. JOUR. : RZKham., No. 1959, No. 88865

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : kind of finish should be manufactured only after tests conducted at the shoe factory to determine the possibility of correcting defects of the surface layer which develop during footwear manufacture (on wet attrition, ironing, action of acetone, etc.). Methods and means are described for correcting small deep defects and using finishes prepared from synthetic resins and solvents. Of importance is the method of preserving component parts of footwear from soilage by means of a protective coating applied by spraying and removed prior to final finishing of the article. New effective means are utilized to correct flaws of surface layer of patent and metallized leather.

M. Lyuksemburg.

CARD: 2/2

292

MANDA, Karel, dr.

A reserve of creative technicians. Tech prace 14 no.7:555-556
Jl '62.

1. Krajska rada Ceskoslovenske vedecko-technicke spolecnosti
Stredoceskeho kraje.

Z/059/62/000/002/004/009
D236/D308

AUTHOR: Manda, Václav

TITLE: Protection of strain gages against humidity

PERIODICAL: Zpravodaj VZLU, no. 2, 1962, 35-36

TEXT: The author describes tests on insulating materials carried out at VZLU. The materials were: Huggenberger Tepic wax with or without rubber film, microwax PLP II and TIMP-4, Philips PR 9244 and Epoxy 1200. The first three were found to be the best. There are 2 figures and 2 tables.

Card 1/1

KLABOCH, L., inz.; DUFEK, Jaroslav, inz.; HAJEK, E., doc., inz.; REZNICEK, I., inz.; ROD, F., inz.; DRDA, J., inz.; MATOUSEK, B., inz.; KOUSAL, P., inz.; MANDA, V.; CAIS, O., inz.; NOVAK, S.; URBAN, S.; HANKE, M., inz.; VOKURKA, V., inz.; FOGL, J., inz.; HROMIR, M., inz.; SOLIN, J., prof., inz.; SLEZAK, A., inz.; TITLBACH, Z., inz.; DREXLER, J., inz.; HORNA, O., inz.; KUPEC, J., inz.

Discussion on tensiometry. Zpravodaj VZLU no.2:37-46, 69-80 '62.

1. Vyzkumny a zkusebni letecky ustav (for Dufek, Reznicek, Manda, Cais, Drexler and Kupec) 2. Statni vyzkumny ustav tepelne techniky (for Klaboch, Rod, Drda, Matousek, Titlbach). 3. Ceske vysoke uceni technicke (for Hajek, Solin). 4. Ustav pro vyzkum motorovych vozidel (for Hanke, Vokurka, Fogl, Hromir). 5. Vyzkumny ustav matematickych stroju (for Horna). 6. Moravan, n.p., Otrokovice (for Kousal). 7. Mikrotechna, Holesovice (for Novak), 8. Zavody V.I.Lenina (for Urban). 9. Svermovy zavody, Vyzkumny ustav (for Slezak).

MANDACHE, Florian

Hyperfunction and hypofunction of the adrenal medulla, clinical and experimental studies. Med. int., Bucur. 7 no.4:48-64 Oct-Dec 55.

1. Clinica Chirurg. I.M.F. Spitalul Brincovenesc.
(ADRENAL MEDULLA, diseases
hyperfunct. & hypofunct.)

EXCERPTA MEDICA Sec 16 Vol. 5/11 Cancer Nov 57

4428. MANDACHE F., PRODESCU V., LUTESCU I., STANCIULESCU P. and ZAHARIA M. Considerații anatomo-clinice în legătură cu 15 cazuri de cancer tiroidian *Anatomo-clinical contributions concerning 15 cases of malignant tumour of the thyroid gland* Chirurgia (București) 1956, 5/4 (596-602)

In a series of 248 thyroidectomies, 15 cases of cancer were found. In 12 of the 15 cases the cancer developed in nodular goitres, in older patients, most of them town-inhabitants. In 12 cases hyperthyroidism was associated. The clinical diagnosis could be made only in 2 cases. In 3 the diagnosis was established macroscopically during operation. In all other cases the diagnosis was microscopically established. Late results were favourable in 12 out of 15 cases.

RUMANIA/Human and Animal Physiology (Normal and Pathological).
Internal Secretion. Gonads. T

Abs Jour: Ref Zhur-Biol , No. 17, 1958, 79886.

Author : Mandache, Fl.; Prodescu, V.; Lutescu, I.; Dejan, Z.
Inst :

Title : Appendicular Discinesia of Ovarian Origin.
(Gonad-Appendicular Syndrome in Woman. I. Experimental
Investigation.

Orig Pub: Studii si cercetari endocrinol. Acad. RPR, 1956,
7, No 1, 85-90.

Abstract: No abstract.

Card : 1/1

MANDACHE, Fl.; PRODESCU, V.; LUTESCU, I.; BEJAN, Z.

Appendicular dyskinesia of ovarian origin; the gonado-appendicular syndrome in the female. Rumanian M. Rev. 2 no.2:75-78 Apr-June 58.

(APPENDICITIS, etiol. & pathogen.

ovarian dysfunct. causing appendicular dyskinesia)

(OVARIS, dis.

funct. disord. causing dyskinesia & appendicitis)

EXCERPTA MEDICA Sec 10 Vol 12/7 Obstetrics July 59

1265. CHANGES IN APPENDICULAR MOTILITY OF OVARIAN ORIGIN. I. THE GONADO-APPENDICULAR SYNDROME IN WOMEN. A CLINICAL AND EXPERIMENTAL STUDY - Les dyscinésies appendiculaires d'origine ovarienne. Le syndrome gonado-appendiculaire chez la femme. Etude clinique et recherches expérimentales - Mandache F., Prodescu V., Lutescu I., Bejan S. and Diaconu A. Bucarest - GYNEC. ET OBSTET. 1958, 57/2 (217-221) Graphs 3

The existence of a gonado-appendicular syndrome was suggested by the fact that attacks of appendicitis are often observed during the premenstrual period in patients with disturbed ovarian function. The mechanism of this gonado-ovarian syndrome might be explained by changes in the oestrogenic activity of the ovary, causing modifications of appendicular motility, especially during the premenstrual period.

TSURAY, I., prof., MANDAKE, Florian, dots.. KEVER, George (Bukharest)

Treatment of arteritis by lumbar sympathectomy associated with
sclerotization of the adrenal medulla [with summary in English]
Vest.khir. 81 no.9:114-117 S'58 (MIRA 11:11)

1. Chlen-korrespondent Akademii Rumynskoy Narodnoy Respubliki.
(for Tsuray).

(ARTERITIS, therapy

lumbar sympathectomy with sclerotization of adrenal
medulla by sodium salicylate inject. (Rus))

(SUMPATHECTOMY, in various diseases

lumbar in arteritis ther., with sclerotization of
adrenal medulla by sodium salicylate inject. (Rus))

(ADRENAL MEDULLA,

sclerotization by sodium salicylate inject. in ther.
of arteritis, with lumbar sympathectomy (Rus))

(SODIUM SALICYLATE, therapeutic use

arteritis ther. by sclerotization of adrenal
medulla with lumbar sympathectomy (Rus))

(SCLEROSING SOLUTIONS, therapeutic use

sodium salicylate sclerotization of adrenal medulla
in arteritis ther., with lumbar sympathectomy (Rus))

EXCERPTA MEDICA Sec 9 Vol 13/8 Surgery August 59

4584. ABDOMINAL-ENDOANAL RECTAL RESECTION WITH PRESERVATION OF THE ANAL MUCOSA (FUNCTIONAL RECTAL SURGERY) - Abdomino-intra-anale Resectio recti mit Bewahrung der Analschleimhaut (Beitrag zur funktionellen Mastdarmchirurgie) - Mandache P1. Chir. Univ.-Klin. Brincovenesc, Bukarest - ZBL. CHIR. 1958, 83/8 (568-574) Illus. 3

This method was employed in 22 cases of rectal cancer and 4 of inflammatory stenosis. No fistulas developed since 'suture-less' colo-anal anastomosis had been carried out. Cicatrization was promoted by excoriation of the anal mucosa (1 cm.) at its cranial end. In the beginning of the experiments, one case had developed gangrene of the pulled-down loop, which was voluminous; the sphincteric apparatus was hypertonic. This operation was done in patients with cancer of the rectum more than 7 cm. from the anal opening. Immediate and long-term functional results (2.5 yr. postoperatively) are better than those obtained by resection with excoriation of the anal mucosa.

TURAI, I.; MANDACHE, FL., Assistant Prof.; KOVER, Gh., Dr.

Lumbar sympathectomy associated with medullosclerosis of the adrenal glands in the treatment of arteritis: long-term results. Rumanian M. Rev. 3 no.1:45-48 Jan-Mar 59.

1. Correspondent member of the R.P.R. Academy (for Mandache).

(ARTERITIS, surg.

lumbar sympathectomy combined with chem.-induced adrenal medullosclerosis)

(SYMPATHECTOMY, in various dis.

lumbar, in arteritis, with chem-induced adrenal medullosclerosis)

(ADRENAL MEDULLA, eff. of drugs on

chem.-induced sclerosis in ther. of arteritis, with lumbar sympathectomy)

MANDACHE, Fl.; PRODESCU, V.; TEODORESCU, M.; CONSTANTINESCU, S.

Considerations on intestine transplants. Rumanian M Rev. no.4:63
O-D '60.

(INTESTINES transplantation)

MANDAKE, F.; PRODESCU, V.; CONSTANTINESCU, S.

Surgical treatment of rectal cancer. Khirurgia 36 no.2:49-53
F '60. (MIRA 13:12)

(RECTUM—SURGERY)

~~MANDACHE, F.~~ [Mandache, F.]; PRODESCU, V. [Prodescu, V.]; DZHILOORTYANU, M.
[Dzhiortianu, M.]; KONSTANTINESKU, S. [Constantinescu, S.];
LUTSESKU, I. [Lucescu, I.]

Surgical treatment of peptic ulcer. Khirurgiia 36 no.12:61-68
166. (MIRA 14:1)

1. Iz khirurgicheskoy kliniki bol'nitsy Brynkovenesk (zav. -
dotsent F. Mandake), Bukharest.
(STOMACH—SURGERY)

MANDACHE, F.

SURNAME, Given Names

Country: Rumania

Academic Degrees: -not given-

Affiliation: *)

Source: Timisoara, Timisoara Medicala, Vol VI, No 1, Jan-Jun 1961, pp 33-37.

Data: "Reanimation in Terminal Collapse State With Transfusions of
Oxygenated Blood Through Artificial Heart-Lungs."

Authors:

MANDACHE, F.

MATEESCU, D.

PRODESCU, V.

KOVER, Gh.

ROSCA, S.

CIOPALA, E.

MATEICA, Monica

CONSTANTINESCU, S.

LUTESCU, I.

CANTARGIU, Sofia

TANCIU, I.

*) Work performed at the Surgical Clinic of "Brincovenesc" Hospital
(Clinica de Chirurgie a Spitalului "Brincovenesc"), Director: F.
MANDACHE.

670 981643

MANDACHE, F.; PRODESCU, V.; CONSTANTINESCU, S.; KOVER, G.; STANCIULESCU, P.

Sympathectomy associated with adrenalo-omentopexy. A method for portal dérivation of the circulation of the adrenal glands. Rumanian med. rev. no.2:63-70 '62.

(SYMPATHECTOMY) (ADRENAL GLANDS) (PORTAL SYSTEM)

RUMANIA

MANDACHE, Fl., Conf; BOGDAN, I., Dr.

Brincovenesc Hospital Surgical Clinic, Bucharest
(Clinica de Chirurgie a Spitalului "Brincovenesc,"
Bucuresti) - (for all)

Bucharest, Viata Medicala, No 17, 1963, pp 1163-1170

"Acute Hemorrhagic Syndromes in Surgery Due to Hyper-
fibrinolysis"

(2)

12-11-63

MANDACHE, Fl., Lecturer.

"Brincovenesc" Surgical Clinic (Clinica chirurgicale "Brincovenesc");
Director: Lecturer F. Mandache.

Bucharest, Viata Medicala, No 20, 15 Oct 63, pp 1419-1424

"Indications and Methods of Medical and Surgical Treatment of
Chronic Occlusive Arteritis of the Legs."

MANDACHE FL

5

10/1/68

MANDACHE, FL., Lecturer; MANDACHE, A., AB; MANDACHE, A., AB;
- MANDACHE, C., '90.

such as, Idena, No 6, Nov-Dec 68, pp 44-449

"The Importance of Night Trauma in the Prevention of Motor
Accidents."

(1)

MANDAKE, F., [Mandache, F.], dotsent; PRODESKU, V. [Prodescu, V.];
KALOINESKU, M. [Caloinescu, M.]; CHERBULESKU, K. [Cherbulescu, K.].

Surgical treatment of cardiospasm (extramucosal thoracoabdominal
partial esophagocardiectomy). Khirurgia 39 no.6:10-17 Je '63.

(MIRA 17:5)

1. Iz khirurgicheskoy kliniki (dir. - dotsent F. Mandake) [Mandache, F.]
Bukharestskoy klinicheskoy bol'nitsy Brynkovenesk.

MANDACHE, Fl.; MATEESCU, D.; KOVER, Gh.; POPESCU, M.

Role of the adrenal glands in hemodynamic disorders in shock patients. Stud. cercet. endocr. 15 no.3:233-240 '64.

MANDACHE, FL.; PRODINSCHI, V.; POPOANESCU, M.; DOMITACHEVICU, S.;
VASILIU, M.

The place of broad gastric resection with gastroduodenal anas-
tomosis in the surgical treatment of gastroduodenal ulcer.
(Indications, contraindications, technique, immediate and late
results). Rumanian med. rev. 19:1:58-64 Ap-Je'65.

SOTIROV, Ap.; MANDADZHINY, N.

Use of the trip and - was using photographs for the needs of short-term hydrologic forecasts. Khidro i meteorolog 13 no. 5:52-62 '64.

MANDAK M.

CZECHOSLOVAKIA/Pharmacology - Toxicology, Adrenergic Agents.

U-2

Abs Jour : Ref Zhur - Biol., No 3, 1958, 12871

Author : Mandak, M., Hasik, A.

Inst : ~~_____~~

Title : The Effects of Sympathomimetic Agents on the Umbilical Vessels.

Orig Pub : Farmacia (Ceskosl.) 1956, 25, No 4, 99-107.

Abstract : When umbilical stumps were perfused with solutions of adrenaline, analeptin, pedrolone and ephedrine, there was a slowing of the flow of fluid. Thus, sympathomimetic agents cause a narrowing of the umbilical vessels.

Card 1/1

MANDAK, M.; STRUHAR, M.

Determination of sulfur in ichthammol and some preparations containing ichthammol. Cesk. farm. 10 no.9:456-459 '61.

1. Katedra galenickej farmacie Farmaceutickej fakulty UK, Bratislava.
(ICHTHAMMOL chem) (SULFUR chem)

HRELOVA, E.; MANDAK, M.

Favorable effects of exercising the vocal muscles in the recovery from fatigue of higher nervous activity. Cas.lek.cesk 100 no.43:1355-1360 27 0 '61.

1. Hygienicky ustav lekarske fakulty PU v Olomouci, prednosta prof. Dr. Sc. MUDr. Jan Kabelik. Katedra telesne vychovy lekarske fakulty PU v Olomouci, prednosta Miroslav Mandak.

(CENTRAL NERVOUS SYSTEM physiol)
(VOCAL CORDS physiol) (FATIGUE)

MANDAK, Milan, doc., PhMr. (Bratislava, Ulica Gaborarov 12); STRUHAR,
Milan, LICHNEROVA, Irena

Use of surface active agents in the preparation of extracts
from drugs. Acta pharmac 6:127-146 '62

1. Department of Galenical Pharmacy, Faculty of Pharmacy,
Bratislava.

MANDAK, Milan, doc. PhMr (Bratislava, Ulica Odbojarov 12); STEUBER, Milan

Some possibilities to determine alkaloids in the Tinctura belladonae, Extractum Belladonae ~~exsiccatum~~ and ~~Extractum~~ hyoscyami exsiccatum. Acta pharmaz 6:147-165 '62

1. Department of Galenical Pharmacy, Faculty of Pharmacy, Bratislava.

4 author

3

CHALABALA, M; MALÝ, J; MANDÁK, M; ŽAČEK, H.

Czechoslovakia

Bratislava, Pharmaceutický Obzor, No 10, 1962, pp 458-466

"Survey of the Activity of Galenic Pharmacy."

Mandak, M.

MANDAK, M.; STRUHAR, M.; KLUCAROVA, H.

CSR

Dept. of Galenic Pharmacy, Pharmaceutical Faculty, Charles University (Katedra
galenickej farmacie Farmaceutickej fakulty UK), Bratislava

Bratislava, Farmaceuticky Obzor, No 3, 1963, pp 97-105

"Contribution to the Determination of Tropane Alkaloids in Some Galenic
Preparations"

(3)

CZECHOSLOVAKIA

STRUHAR, M; MANDAK, M; POBOCIKOVA, K.

Chair of Galenic Pharmacy of the Pharmaceutical Faculty UK
(Katedra galenickej farmacie Farmaceutickej fakulty UK),
Bratislava (for all)

Bratislava, Farmaceuticky obzor, No 4, 1963, pp 153-156

"Content of Some Galenic Preparations of Rhubarb Roots."

CZECHOSLOVAKIA

M. HANBAK, Chair of Galenical Pharmacy of the Pharmaceutical Faculty
Comenius University, Bratislava.

"Study of Some Non-Ionic Surface-Active Substances. Part 1. The
Surface Activity and Viscosity of Solutions."

Prague, Czechoslovakian Pharmacie, Vol 12, No 1, Jan 1963, pp 14-20.

Abstract (English summary modified). Studies on the viscosity and
surface and inter-surface tensions of 3 surfactance-emulsifiers made
by the Slovak Ph. Plicka plant: Slovazol D, Slovazol FL and Slovazol
50-50, being polymers of ethylene oxide with oleyl alcohol, castor oil
and stearic acid respectively; at 20 concentrations between 0.02% to
10%. The first 2 are better emulsifiers, the 3rd a better stabilizer.
The photomicrographs of emulsions, 1 German, 2 Russian, 3 Soviet,
Hungarian, 1 Polish and 4 Western references.

MANDAK, Milan, doc., PhMr. (Ul.Odbojarov 12, Bratislava); GEORCH,
Dionyz

Studies on the biological properties of some substances of
the type of polyoxyethylene derivatives. Acta pharmac 8:
105-124 '63.

1. Chair of Galenic Pharmacy, Faculty of Pharmaceutics,
Komensky University, Bratislava.

L 36195-66 EWT(1) IJP(c)
ACC NR: AP6011449 SOURCE CODE: UR/0109/66/011/004/068.1/00.2

AUTHOR: Rodeanu, E. I.; Mandake, S. G.

ORG: none

TITLE: Selecting the cavity resonator and sphere radius in the measurements of
tensor susceptibility of ferrites 15

SOURCE: Radiotekhnika i elektronika, v. 11, no. 4, 1966, 684-692

TOPIC TAGS: ferrite, magnetic susceptibility, SHF

ABSTRACT: The tensor susceptibility of ferrites (in SHF plus constant magnetic field) has been measured by disturbing the field inside a resonator by a small ferrite specimen. The article offers criteria for selecting the shape and size of the resonator, mode, and the spherical specimen radius. It is found that the cylindrical resonator yields better results than the rectangular; the cylinder

Card 1/2

UDC: 621.372.4:3:621.317.412:621.318.134

L 36195-66

ACC NR: AP6011449

diameter-to-altitude ratio should be so selected that the ferrite sphere placed in two definite points inside the cylinder causes equal small disturbances to the magnetic field. These points have a minimum electric field. Only the modes corresponding to $l = 1$, where l is the exponent in a Bessel function (A. Angot, Compl. de mathématiques, Paris, 1957, p. 361), are recommended; the $TM_{1,2}$ mode is the most suitable. Curves for $TE_{1,2}$ and $TM_{1,2}$ are supplied for selecting the ferrite sphere radius. Orig. art. has: 3 figures and 45 formulas.

SUB CODE: 09 / SUBM DATE: 29Dec64 / ORIG REF: 002 / OTH REF: 014

Card 2/2 *MLP*

878 MANDAKOV, N.S.

8085* Photoluminescence of the Sublimate Phosphor of
Silver Iodide. In Russian. K. V. Shalimova and N. S.
Mandakov. Doklady Akademii Nauk SSSR, new ser., v. 82,
Feb. 1952, p. 575-578.
Includes spectrograms showing the above.

KRALOVA, Libuse; TEICHMANN, Vladimir; JOHANOVSKA, Kveta; MANDAKOVA, Tamara;
VALENTOVA, Vlasta

Gastric secretion and motility on stimulation of the mechanical and
chemical receptors in the stomach. Sborn. lek. 60 no.2:37-43 Feb 58.

1. II interni klinika fakulty vseobecneho lekarstvi university
Karlovy v Praze, prednosta prof. Dr. Frantisek Herles. L. K. II.
interni klinika, U. nemocnice 2, Praha 2.

(STOMACH, physiology

stimulation of mechanical & chem. receptors in measurement of
secretion & motility in various dis. (Cz))

(GASTRIC JUICE,

secretion, measurement in various dis. by stimulation of
mechanical & chem. receptors of stomach (Cz))

MANDAKOVA, TAMARA

VALENTOVA, Vlasta; TEICHMANN, Vladimir; JOHANOVSKA, Kveta; KRALOVA, Libuse;
MANDAKOVA, Tamara

Hemodynamic changes during mechanical stimulation of the stomach.
Sborn. lek. 60 no.2:44-49 Feb 58.

1. II. interni klinika fakulty vseobecneho lekarstvi university Karlovy
v Praze, prednosta prof. Dr. Frantisek Herles. VI. V., II. interni
klinika, U nemocnice 2, Praha 2.

(BLOOD PRESSURE, physiology

changes caused by mechanical stimulation of stomach in hyper-
tensive patients (Cz))

(STOMACH, physiology

mechanical stimulation causing blood pressure changes in
hypertensive patients (Cz))

(HYPERTENSION, physiology

mechanical stimulation of stomach causing blood pressure changes
(Cz))

KOJANOVSKA, Kveta; TEICHMANN, Vladimir; KRALOVA, Libuse; MANDAKOVA, Tamara;
VELENTOVA, Vlasta

The influence of mechanical stimulation of the stomach on the bile ducts. Sborn. lek. 60 no.2:50-59 Feb 58.

1. II. interni klinika fakulty vseobecneho lekarstvi university
Karlovy v Praze, prednosta prof. Dr. Frantisek Herles. K. J. II.
interni klinika, U nemocnice 2, Praha 2.

(STOMACH, physiology

mechanical stimulation, eff. on bile ducts (Cz))

(BILE DUCTS, physiology

eff. of mechanical stimulation of stomach on bile ducts (Cz))

L 23801-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EPR/T/EWP(t)/EWP(b)
Pr-4/Ps-4/Pu-4 IJP(c) JD/WH/JG/WH

ACCESSION NR: AP4049457

S/0131/64/000/011/0513/0520

AUTHOR: Mandal, G., Godina, N.A., Keler, E.K.

TITLE: Effect of admixtures of silica, titanium¹⁷ dioxide, and aluminum¹⁷ oxide on the properties and phase composition of zirconium materials stabilized with cerium dioxide

SOURCE: Ogneupory*, no. 11, 1964, 513-520

TOPIC TAGS: silica, titania, alumina, ceria, zirconium compound, zirconia stabilization, zirconia phase composition

ABSTRACT: For the practical application of ceria (CeO_2) as a stabilizer of zirconia (ZrO_2), information was needed on the effect of TiO_2 , SiO_2 , and Al_2O_3 , which are often found in commercial zirconia, on the physical and technical properties of stabilized zirconia. The starting material was commercial zirconia of the following composition: 99.28% $\text{ZrO}_2 + \text{HfO}_2$; 0.30% SiO_2 ; 0.06% Al_2O_3 ; 0.03% Fe_2O_3 ; traces of TiO_2 ; the calcination loss at 100C was 0.22%. Spectral analysis revealed Si, Al, Fe, Mg, Na, K. The content of HfO_2 was not determined. It was found that when zirconia is stabilized with ceria an admixture of silica is impermissible since the properties of the refractory markedly deteriorate. Upon adding 3% alumina and roasting at 6150C the properties of the CeO_2 -

Cord ^{1/2}

L 23801-65

ACCESSION NR: AP4049457

stabilized zirconia remained virtually constant except for refractoriness-under-load, which dropped appreciably. The addition of TiO_2 made it possible to obtain sintered material at 1650C without substantially affecting its physical and technical properties, except for refractoriness-under-load, which still dropped. Silicates of trivalent cerium formed in the zirconia-ceria-silica compositions at 1600-1650C, while the tetragonal and cubic solid solutions of ceria and zirconia were decomposed. The addition of alumina up to a ratio of 1:1:1 for zirconia, alumina, and ceria with roasting up to 1650C did not affect the phase composition of the zirconia-ceria reaction products. In the $\text{ZrO}_2 + \text{CeO}_2 + \text{TiO}_2$ compositions, a liquid phase formed at 1300C which promoted equilibrium in these compositions. The formation of ternary compounds or the titanates of zirconium and cerium was not detected. Orig. art. has: 4 tables and 6 figures.

ASSOCIATION: Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry, AN SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 007

OTHER: 004

Card 2/2

ACCESSION NR: AP4040952

S/0020/64/156/005/1127/1129

AUTHOR: Toropov, N.A.(Corresponding member AN SSSR); Mandal, Gurudas

TITLE: Solid lanthanum and yttrium diorthosilicate solutions

SOURCE: AN SSSR. Doklady*, v. 156, no. 5, 1964, 1127-1129, side of insert facing p. 1128

TOPIC TAGS: lanthanum, yttrium, lanthanum diorthosilicate, yttrium diorthosilicate, rare earth oxide, La sub 2 O sub 3, SiO sub 2

ABSTRACT: Present work is devoted to a study of the phase relationships between lanthanum and yttrium diorthosilicates related to the various structural groups of compounds of this type. Lanthanum trioxide, yttrium oxide and crystalline SiO₂ were used as the starting melts. The starting blends were prepared by a prolonged mixing of precisely weighed oxides in an agate mortar. Small cylinders were then pressed out of this mixture. They were then prefused in an electric arc. Subsequent heat treatments were done in an electric microfurnace described by F. Ya. Galakhov et al (Izv. AN SSSR, OKhN, No. 8, (1961), 1365). The furnace was graduated for the melting points of Pd, Pt and corundum. Accuracy of temperature measurement was $\pm 20^\circ\text{C}$. When conducting the experiments, the temperature was gradually increased up to the melting of the sample. The temperature was raised

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ACCESSION NR: AP4040952

another 1500 after the sample had been melted, after which it was lowered to a given annealing temperature. A phase diagram for the system lanthanum diorthosilicate - yttrium diorthosilicate was constructed. It pertains to a type which is characterized by the presence in the system of a limited mutual solubility of the components in the solid phase. First of all, this condition is caused by the diversity of the diorthosilicates in the investigated structures. The area where the mixture of two solid solutions of a limited concentration exists takes up a large part of the diagram. Inasmuch as both components of the system melt inconsistently, areas of stable orthosilicates appear on the liquidus and solidus curves. "Authors express their thanks to I. A. Bondar' for valuable hints during the execution of this research." Orig. art. has: 3 figures.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR
(Institute of Silicate Chemistry, AN SSSR)

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ENCL: 00

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NO REF SOV: 009

OTHER: 000

Card 2/2

KUFFER, Alfred; MANDALIK, Miroslav

Use of polysaccharide substances of wood. Drevo 17 no.12:
355-358 D '62.

1. Vyskumny ustav papieru a celulozy (for Kuffer). 2. Chemicky
ustav, Slovenska akademia vied, Bratislava (for Mandalik).

MANDALOVSKAYA, M.V.

VINARSKIY, Ye.N., inzhener; LINKOV, A.V., inzhener; MAZING, I.V., inzhener;
CHERETIANKO, V.I., inzhener; RYKHINA, R.I., inzhener; CHUPRINA,
N.A., inzhener. PLOTNIKOVA, M.Z., inzhener; LEYPSON, A.M., inzhener;
LELYAKOVA, L.P., inzhener; MANDALOVSKAYA, M.V., inzhener; UZUNKUYAN,
I.D., inzhener; SEVRYUKOV, Ye.G., inzhener; VINARSKIY, Ye.N., redaktor;
ALADOVA, Ye.I., tekhnicheskij redaktor

[Metal demountable headframe] Prokhodcheskie metallicheskie sborno-
razbornye kopry. Moskva, Ugletekhizdat, 1954. 110 p. (MLRA 8:4)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii
i mekhanizatsii shakhtnogo stroitel'stva.
(Mine buildings)

MANDALYAN, R.A.

Silicites from Upper Jurassic sediments in the northeastern part of
the Armenian S.S.R. Izv. AN Arm. SSR. Nauki o zem. 17 no.3/4:11-20
'64. (MIRA 17:11)

1. Institut geologicheskikh nauk Armyanskoy SSR.

MANDALYAN, R.A.; CHOLAKHYAN, L.S.

Pillow lavas from Upper Jurassic sediments in the Agstev and
Tavush interfluvium. Dokl. AN Arm. SSR 38 no.3:169-173 '64.
(MIRA 17:6)

1. Institut geologicheskikh nauk AN Armyanskoy SSR. Predstavleno
akademikom AN Armyanskoy SSR K.N.Paffengol'tsem.

MANDALYAN, P.A.

Types and characteristics of the formation of Upper Jurassic igneous
rocks in the northeastern part of the Armenian S.S.R. Dokl. AN Arm SSR
39 no.5:295-299 '64.
(1964:2)

1. Institut geologicheskii nauk AN Arm SSR. Submitted Jan. 1, 1964.

MANDALYAN, R.A.; PETROSOV, I.Kh.; TSAMERYAN, P.P.

Mountain leather from the Upper Jurassic dolomite formation
in the northeastern part of the Armenian S.S.R. Dokl. AN Arm.
SSR 41 no.3:171-176 '65. (MIRA 18:11)

1. Institut geologicheskikh nauk AN ArmSSR. Submitted March 21,
1965.

L 17265-62
 ES(1)/ES(6)/ES(k) EWT(m)/BDS/BS(a)/ P/056/63/014/001/002/004 1/56
 RMC/ASD/AFMTC/AFMDS/AFGC Pb-4 A 65

AUTHOR: Piotrowski, E., Professor, Doctor; Stanl-
 zowski, L.; Lempiok, E., Doctor; and
 Mandat, A.

TITLE: Effect of artificial hibernation on serum
 transaminase activity of rats in normal con-
 ditions and in traumatic shock 2

PERIODICAL: Acta Physiologica Polonica, v. 14, no. 1,
 1963, 45-54.

TEXT: As a link in the authors' comprehensive stu-
 dy on the pathogenesis of shock and the biochemical, espe-
 cially enzymatic, factor in shock mechanism, the authors
 undertook the above study [see title] to determine the
 hitherto unstudied effect of hibernation on the enzymatic
 processes which change so typically in shock, and specific-
 ally how it affects traumatic shock evaluated on the basis
 of transaminase activity in the serum. Study comprised 330
 rats divided, in addition to controls, into three groups;

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0

Effect of artificial hibernation...

I - 90 rats in which hyperthermia and hibernation were induced, II - 200 rats subjected to traumatic shock, and III - in which both I and II were induced. Artificial hibernation was produced by injection of a lytic cocktail, composed of 3 g each of largactil and phenergan and 6 mg per kg of body weight of dolantine, and subsequent air-cooling at - 20°C. Traumatic shock was produced by the Noble-Collip method in a drum designed by the authors for 15 minutes at 45 rpm. SP and 30f determinations were made by the Reitmann and Frankel colorimetric method on samples of aspirated blood, flowing directly to the chest cavity after resection of one lung of the etherized animal, drawn after 1, 2, and 6 hours of hibernation, 12 hours after cooling to 19°C (or 6 hours after rewarming), and at daily intervals during the first week, or at the same intervals after induction of shock. Authors established that without shock (I), hibernation increased moderately the activity of the two enzymes.

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Effect of artificial hibernation...

with a peak increase of no more than double after 6 hours, and return to normal level after a few days. Shock (II) produced a rise in GPT by 20 times and in GOT by 10 times, with the same results for rats hibernated prior to the shock (III). Authors conclude that, as assessed from blood transaminase activity, the Noble-Collip shock was not prevented by artificial hibernation. There are 2 tables and 2 figures, and 14 references, of which 4 are Polish and 10 Western.

ASSOCIATION: Zaklad Fizjologii i Zaklad Chemii Fizjologicznej Pomorskiej AM (Department of Physiology and Department of Physiological Chemistry of the Pomerania Academy of Medicine) Szczecin

SUBMITTED: August 16, 1962

Card 3/3

HABERSTOLZ, F., Obering (Kassel); MANDARIC, Dusan [translator]

Some remarks on the theme "Trolejbus." Tehnika Jug 17 no.9:Suppl.
Saobracaj 9 no.9:1801-1803 S '62.

MĂNĂȘESCU, L.

Substances with antitubercular action. C. V. Gheorghiu, L. Stoicescu-Crivetz, C. Budeanu, E. Budeanu, M. Alexa-Petrovanu, L. Mandasescu, H. Constantinescu, A. Toma and G. Stavri (Rev. Chim., Bucharest, 1956, 1, No. 1, 97--125).

For abstract see card for C. V. GHEORGHIU

RUMANIA/Microbiology - Microbes Pathogenic for Man and Animals. F
Bacteria. Mycobacteria.

Abs Jour : Ref Zhur Biol., No 22, 1958, 99470

Author : Gheorghiu, C.V., Stoicescu-Crivetz, L., Mandasescu, L.

Inst : -

Title : Antituberculous Action of p-Amino-o-Haloidbenzohydroxamic Acids.

Orig Pub : Studii si cercetari chim., 1956, 4, No 1-2, 39-45

Abstract : The authors prepared the following: from chlorides of the corresponding acids p-nitro-o-haloidbenzohydroxamic, di-(p-nitro-o-haloidbenzo) hydroxamic and Di-(p-amino-o-haloidbenzo) hydroxamic acids with various halogens (Cl, Br, I). The acids with the nitro-group did not exert any inhibiting action upon the growth of tubercule bacilli (TB) in vitro, while the acids with the amino-group in the p-position in the relation to the hydroxamic group inhibited the growth of TB in the Sutton medium in

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RUMANIA/Microbiology - Microbes Pathogenic for Man and Animals. F
Bacteria. Mycobacteria.

Abs Jour : Ref Zhur Biol., No 22, 1958, 99470

a concentration of 10^{-5} to 10^{-6} mol per one liter. --
M.A. Gruzman

Card 2/2

RUMANIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77624.

Author : Stoicescu-Crivetz, L. and Mandasescu, L.

Inst : Not given.

Title : Amidoximes Obtained from p-Amino-o-halogenobenzoic Acids.

Orig Pub: Studii Si Cercetari Stiint Acad RPR, Fil Iasi Chim, 7, No 2, 117-121 (1957) (in Rumanian with summaries in French and Russian).

Abstract: In the course of their search for new antitubercular compounds, the authors have synthesized compounds of the type $2-R-4-CH_3 \text{ CONHC}_6\text{H}_3\text{C(NH}_2\text{)} = \text{NOH (I)}$ (here and hereinafter $R_a = \text{Cl}$, $R_b = \text{Br}$) and $2-R-4-NH_2 \text{ C(=NOH) C}_6\text{H}_3\text{COOCH}_3 \text{ (II)}$. The above-mentioned products were obtained by the fol-

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